PII-56: Biological Correlates of Mindfulness Meditation: An Integrative Review

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Abstract:
Introduction: The purpose of this integrative review was to analyze, summarize and synthesize the evidence to determine relationship between mindfulness meditation practice and biomarkers. Psychoneuroimmunology Theory postulates a complex relationship that exists among
psychological, behavioral, neurological and immune factors in the maintenance of homeostasis. Mindfulness is the paying attention, on purpose, to the moment to moment direct internal and external experience without judgment. The positive outcomes in psychological and behavioral measures related to mindfulness are well documented. There is a growing body of research on the changes in measurable biological variables associated with mindfulness. Therefore, the specific aim of this study was to address the question, “What are the relationships of meditation with neuroendocrine, sympathetic, immunological factors and brain activity?”

**Method(s):** A search of peer reviewed research articles in CINAHL, MEDLINE, PsychINFO, Psychological and Behavioral Sciences Collection from June 1999 to June 2009 using “Meditation” AND (cortisol OR cytokines OR immune OR electrical OR melatonin) retrieved 105 articles. Studies were limited to those controlled trials published in English. Differences in the processes of various meditation techniques informed the decision to refine the review to “mindfulness meditation” (MM), decreasing the number to 13.

**Results:** Evidence suggests that there may be a repeated relationship between mindfulness meditation and cortisol levels. While a number of studies have used immunological measures, the specific biomarkers have varied, making it difficult to draw conclusion. There may be a relationship between MM and EEG patterns; however, there is not yet adequate evidence to make conclusive statement.

**Discussion & Conclusions:** The research on the biological effects of MM is growing, and there is a need for further studies. Establishing relationship between mindfulness and physiological change would add not only to the unfolding and understanding of the direct and unique role of mindfulness in physical health, but to an understanding of the possible underpinning of psychological and behavioral outcomes.

**Abstract History:**
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

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